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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/684,162 | 10/10/2003 | Edze Jan Tijsma | Tijsma 3-3-1-1 X | 2291 |
| 28104 | 7590 | 01/04/2005 | | |
| JONES DAY 77 WEST WACKER CHICAGO, IL 60601-1692 | | | EXAMINER LEVY, NEIL S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1616 | |

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,162

Applicant(s)

TIJSMA ET AL.

Examiner

Neil Levy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8,15-27 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tijisma et al 5993505 and Wolstenholme et al EP 0731067 in view of Thompson et al 5089041 and Al-Zahrani '2001.

Tijisma: see claim 1-the instant controlled release single semipermeable coating of water soluble fertilizer, such that less than 15% (10%) is released in 24 hours claim 3 shows coating thickness of 5-110 microns, claim 4 the processing. Polymers used are as instantly claimed (col. 3)-urethane resin, PVA, PVC, polycaprolactone, polyethylenes, cellulose acetates. Fertilizers include phosphates- example 1, as granules. Added fertilizers (example 1) are Fe, Mn, Zn, Cu, B, Mg.

The amount of coating is of the instant, 1-20% as corresponding to the instant claimed thickness (5-110 microns is disclosed at col. 4, top). The coating is the same, the core is the same, the amount of coating and thickness is the same, as of the instant invention. Example 1, paragraph 2 states delay time can be varied as desired - Example 2 shows varying the solids content of resin during coating permits control of the initial release; less than 15% is released in the first day. Example 3 shows selecting the desired polymer on water vapor transmission rates also permits alteration of release pattern. Thus, although Tijisma did not provide longevity of < 60 days. Tijisma provides all the necessary parameters and components for one to achieve the release rate profile desired. We note also, that only a single layer coating is claimed, but in fact, example 2

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shows varying the material used to coat as the coating process proceeds, thus, readily considered as multiple layers applied in a continuous process.

Wolstenholme does show < 60 days, and shows it was known to require fertilizer over the longevity of the Tijsma periods (p.2, lines 38-42). However, Wolstenholme shows thinner is better, for quicker release (Example 1; Table 1), and any number of polymers can be used-thus those of Tijsma, but with coating level varied, as also taught by Tijsma (col. 5, lines 35-40) but without specifying that required for shorter longevity.

Alzahrani (p.367, col. 1) discusses the CR fertilizer optimization parameters in order to deliver nutrients when the plant demands them, to increase crop yield, quality, etc. Coated fertilizer, releasing by diffusion is, presented, using polyethylene wax.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention, desiring to utilize a controlled release composition, to use one of Tijsma, modified to obtain recognized objectives, as show by Wolstenholme, initial fast release, and complete release in a specified time frame, instantly claimed as 60 days; or with longer release patterns, shown by Tijsma using the same fertilizer cores, coatings, and application parameters, resulting in production of CR of Fertilizer Granules having desired release profiles at one operation. The polymer and the amounts and proportions of polymers are result effective parameters chosen to obtain the desired effects; to optimize plant yield, quality, appearance.

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Claims 1-3, 8-17, 22-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. Tijsma et al 665882. Although the conflicting claims are not identical, they are not patentably distinct from each other because this continuation is in essence claiming the invention of the patent, but at ranges not identical to the patent WVTR and Temperature, and polymers.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant's arguments filed on 8/18/04 have been fully considered but they are not persuasive. Applicant's arguments in respect to the rejection maintained are that the WVTR parameters are critical, Wolstenholme has more than 1 layer, and release at 15°C. Examiner finds, however, the instant WVTR not at issue in the composition – The fertilizer core, polymer coating, and polymer and granule product can be adjusted in accord with desired objectives, given the prior art teachings; that is to apply nutrients when needed. Tijsma show how to do this, while focusing on long duration. Wolstenholme shows initial release, then a

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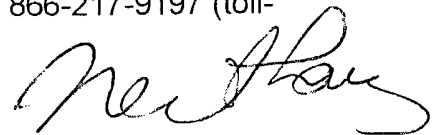
longevity of the instant claimed period to be desirable, and would meet the optimal performance features, discussed by AL-Zahram: However, even though the CR fertilizer granules are seen as obvious over the prior art, the process of adjusting the polymer and coating thickness in regard to size or shape of core, and core components utilizing the WVTR criteria is not obvious.

Claims 8, 15-27 is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Levy whose telephone number is (571) 272-0619. The examiner can normally be reached on Tuesday through Friday 7 AM to 5:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gray Kunz can be reached on (571) 272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



NEIL S. LEVY
PRIMARY EXAMINER